# SOUTH DAKOTA MATHEMATICS STANDARDS
# K-2

## Kindergarten Algebra
## Grade Standards, Supporting Skills, and Examples

**Indicator 1: Use procedures to transform algebraic expressions.**

*Note: Kindergarten students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **K.A.2.1. Students are able to compare collections of objects to determine more, less, and equal (greater than and less than).**<br>• Demonstrate mastery using collections of concrete objects.<br>Example: Are there more red marbles or blue marbles in the jar? |

**Indicator 3: Interpret and develop mathematical models.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **K.A.3.1. Students are able to use concrete objects to model the meaning of the "+" and "-" symbols.**<br>• Model problem situations using physical materials.<br>Example: Mary had 2 crackers and Steve had 2 crackers. How many crackers did they have together?<br>Example: Bob had 5 apples and he ate 1 apple. How many apples does he have left? |

**Indicator 4: Describe and use properties and behaviors of relations, functions, and inverses.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **K.A.4.1. Students are able to identify and extend two-part repeating patterns using concrete objects.**<br>**Example:** Green triangle, orange square, green triangle,__?<br>**Example:** Tennis shoe, tennis shoe, sandal,__? |
| (Comprehension) | **K.A.4.2. Students are able to sort and classify objects according to one attribute.**<br>**Example:** size, shape, or color. |

**Kindergarten Algebra**
**Performance Descriptors**

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|---|---|
| **Advanced** | **Kindergarten students performing at the advanced level:**<br>• recognize and use the plus and minus symbols;<br>• compare, sort, and classify objects;<br>• extend and/or create two-part repeating patterns. |
| **Proficient** | **Kindergarten students performing at the proficient level:**<br>• recognize the plus and minus symbols;<br>• compare, sort, and classify sets of objects based on one attribute;<br>• extend two-part repeating patterns. |
| **Basic** | **Kindergarten students performing at the basic level:**<br>• sort sets of objects based on one attribute;<br>• recognize patterns. |

**Kindergarten Algebra**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **Kindergarten ELL students performing at the proficient level:**<br>• extend two-part patterns;<br>• compare collections of objects to determine which has more or less;<br>• find unknown sums using concrete objects and pictures;<br>• sort and classify objects based on one attribute;<br>• ask questions related to math concepts. |

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| **Intermediate** | **Kindergarten ELL students performing at the intermediate level:**<br>• extend simple patterns using manipulatives;<br>• identify which group of objects has more by telling or showing;<br>• sort objects based on color or shape;<br>• give simple oral responses to questions on topics presented in class. |
| **Basic** | **Kindergarten ELL students performing at the basic level:**<br>• participate in sorting activities with other students;<br>• use correct pronunciation of numbers and terms;<br>• respond correctly to yes or no questions on topics presented in class. |
| **Emergent** | **Kindergarten ELL students performing at the emergent level:**<br>• copy, trace, and write numerals and mathematics symbols;<br>• use correct pronunciation of numbers;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **Kindergarten ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

## Kindergarten Geometry
## Grade Standards, Supporting Skills, and Examples

**Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **K.G.1.1. Students are able to identify basic two-dimensional (plane) figures.**<br>• Describe their likeness and differences and identify them in the environment.<br>Examples:<br>Circle<br>Square<br>Triangle |

**Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **K.G.2.1. Students are able to describe the position of two-dimensional (plane) figures.**<br>**Examples:** Above, between, next to, below, beside |

## Kindergarten Geometry
## Performance Descriptors

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|---|---|
| **Advanced** | **Kindergarten students performing at the advanced level:**<br>• identify, describe, and draw plane figures and find examples in the environment;<br>• identify shapes that have been translated (slid.) |
| **Proficient** | **Kindergarten students performing at the proficient level:**<br>• identify and describe plane figures and find examples in the environment. |
| **Basic** | **Kindergarten students performing at the basic level:**<br>• identify plane figures. |

**Kindergarten Geometry**
**ELL Performance Descriptors**

**Geometry**

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|---|---|
| **Proficient** | **Kindergarten ELL students performing at the proficient level:**<br>• identify and describe plane figures and find examples in the environment;<br>• ask questions related to geometry concepts. |
| **Intermediate** | **Kindergarten ELL students performing at the intermediate level:**<br>• identify plane figures verbally;<br>• recognize and use basic geometry terms;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **Kindergarten ELL students performing at the basic level:**<br>• sort geometric shapes and terms;<br>• use correct pronunciation of names of shapes;<br>• respond correctly to yes or no questions on topics presented in class. |
| **Emergent** | **Kindergarten ELL students performing at the emergent level:**<br>• trace, copy, and draw basic geometric shapes;<br>• imitate pronunciation of geometric shapes and terms;<br>• use non-verbal communication to express geometric ideas. |
| **Pre-emergent** | **Kindergarten ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**Kindergarten Measurement**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Apply measurement concepts in practical applications.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **K.M.1.1. Students are able tell time to the nearest hour using digital and analog clocks.** |
| (Knowledge) | **K.M.1.2. Students are able to name the days of the week.** |
| (Knowledge) | **K.M.1.3. Students are able to identify pennies, nickels, dimes, and quarters using money models.** |
| (Knowledge) | **K.M.1.4. Students are able to estimate length using non-standard units of measure.**<br>**Example:** A book is about ___ paperclips long. |
| (Comprehension) | **K.M.1.5. Students are able to compare and order concrete objects by length, height, and weight.**<br>**Examples:**<br>Length - longer, shorter<br>Height - taller, shorter<br>Weight – heavier, lighter |

**Kindergarten Measurement**
**Performance Descriptors**

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|---|---|
| **Advanced** | **Kindergarten students performing at the advanced level:**<br>• estimate length of concrete objects using non-standard or standard units;<br>• compare and order length, height, and weight of concrete objects using non-standard and standard units;<br>• state the value of coins;<br>• tell time to the nearest half hour. |
| **Proficient** | **Kindergarten grade students performing at the proficient level:**<br>• estimate length of concrete objects using non-standard units;<br>• compare and order length, height, and weight of concrete objects using non-standard units;<br>• identify coins;<br>• tell time to the nearest hour and name the days of the week. |

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| **Basic** | **Kindergarten grade students performing at the basic level:**<br>• estimate length and height of concrete objects using non-standard units;<br>• explain the purpose of money;<br>• read the numbers on a digital clock. |

**Kindergarten Measurement**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **Kindergarten ELL students performing at the proficient level:**<br>• sort coins based on attributes;<br>• tell time to the hour;<br>• explain how they ordered groups of objects based on attributes such as size;<br>• ask questions related to measurement concepts. |
| **Intermediate** | **Kindergarten ELL students performing at the intermediate level:**<br>• use correct pronunciation of coin names;<br>• identify measurable attributes of objects;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **Kindergarten ELL students performing at the basic level:**<br>• participate in measurement activities with other students;<br>• use correct pronunciation using measurement terms;<br>• respond correctly to yes or no questions on topics presented in class. |
| **Emergent** | **Kindergarten ELL students performing at the emergent level:**<br>• participate in measurement activities with other students;<br>• trace, copy, and draw measurement symbols;<br>• imitate pronunciation of numbers and measurement terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **Kindergarten ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**Kindergarten Number Sense**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **K.N.1.1. Students are able to read, write, count, and sequence numerals to 20.**<br>• Say the forward number word sequence to 20 and the backward number sequence from 10.<br>• Say the number before and after a given number in the range 0-20.<br>• Use one-to-one correspondence.<br>• Keep track of what's been counted.<br>• Associate verbal names and standard numerals with whole numbers to 20.<br>• Count objects in a given set and write the corresponding numeral.<br>• Identify ordinal positions using an ordered set of objects, $1^{st}$ through $10^{th}$.<br>√ *Associate written word names with whole numbers to 10.* |
| (Knowledge) | **K.N.1.2. Students are able to use fraction models to create one half of a whole.**<br>**Example:** Divide a cookie equally between two people. |

**Indicator 2: Apply number operations with real numbers and other number systems.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | (Mastery of this indicator does not emerge until first grade.) |

**Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **K.N.3.1. Students are able to solve addition and subtraction problems up to 10 in context.**<br>• Represent problem situations and solve using concrete objects, pictures, or numbers.<br>• Explain how to solve story problems using concrete objects and pictures. |

**Kindergarten Number Sense**
**Performance Descriptors**

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|---|---|
| **Advanced** | **Kindergarten students performing at the advanced level:**<br>• estimate and solve addition and subtraction problems up to 20;<br>• read, write, count, and sequence numerals to 50;<br>• identify unit fractions of a whole. |
| **Proficient** | **Kindergarten students performing at the proficient level:**<br>• solve addition and subtraction problems up to 10;<br>• read, write, count, and sequence numerals to 20;<br>• create one half of a whole. |
| **Basic** | **Kindergarten students performing at the basic level:**<br>• read, write, and count numerals to 10;<br>• solve addition and subtraction problems up to 5. |

**Kindergarten Number Sense**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **Kindergarten ELL students performing at the proficient level:**<br>• read, write, count, and sequence numbers to 20;<br>• solve addition and subtraction problems using manipulatives;<br>• ask questions related to number concepts. |
| **Intermediate** | **Kindergarten ELL students performing at the intermediate level:**<br>• solve simple story problems using manipulatives;<br>• count to 20;<br>• give simple oral responses to directed questions on topics presented in class. |

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| **Basic** | **Kindergarten ELL students performing at the basic level:**<br>• solve some simple addition problems using manipulatives;<br>• count to 10;<br>• participate in number sense activities with other students;<br>• use correct pronunciation of numbers and mathematical terms;<br>• respond correctly to yes or no questions on topics presented in class. |
| **Emergent** | **Kindergarten ELL students performing at the emergent level:**<br>• participate in number sense activities with other students;<br>• copy, trace, and write numerals and mathematics symbols;<br>• imitate pronunciation of numbers;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **Kindergarten ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

## Kindergarten Statistics & Probability
## Grade Standards, Supporting Skills, and Examples

**Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **K.S.1.1. Students are able to describe data represented in simple graphs (using real objects) and pictographs.**<br>**Example:** Using a graph of favorite ice cream flavors, decide which flavor most people like. |

**Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| | (Mastery of this indicator does not emerge until first grade.) |

## Kindergarten Statistics & Probability
## Performance Descriptors

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|---|---|
| **Advanced** | **Kindergarten students performing at the advanced level:**<br>• answer questions about collected data;<br>• construct simple graphs from collected data. |
| **Proficient** | **Kindergarten students performing at the proficient level:**<br>• describe and compare observable quantities of collected data;<br>• interpret data represented in pictographs and bar graphs. |
| **Basic** | **Kindergarten students performing at the basic level:**<br>• identify which group has the most in a set of collected data. |

**Kindergarten Statistics & Probability**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **Kindergarten ELL students performing at the proficient level:**<br>• collect and sort information from a given set of objects;<br>• ask questions related to statistics concepts. |
| **Intermediate** | **Kindergarten ELL students performing at the intermediate level:**<br>• collect information from a given set of objects;<br>• give simple oral or pictorial responses to directed questions on topics presented in class. |
| **Basic** | **Kindergarten ELL students performing at the basic level:**<br>• participate in graphing activities with other students;<br>• respond correctly to yes or no questions on topics presented in class. |
| **Emergent** | **Kindergarten ELL students performing at the emergent level:**<br>• imitate pronunciation of numbers and mathematical terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **Kindergarten ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**First Grade Algebra**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Use procedures to transform algebraic expressions.**

*Note: First grade students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **1.A.2.1. Students are able to use the concepts and language of more, less, and equal (greater than and less than) to compare numbers and sets (0 to 20).**<br>• For numbers 0 - 20, identify one more/one less**.**<br>• Write the words less than or more than between two numbers.<br>Example: 18 is more than 4<br>• Identify a number that is more than/less than a given number. |
| (Application) | **1.A.2.2. Students are able to solve open addition and subtraction sentences with one unknown (☐) using numbers equal to or less than 10.**<br>**Examples:**<br>4 = 3 + ☐<br>☐ + 2 = 4 + 1<br>5 – 3 = ☐<br>1 = ☐ – 2 |

**Indicator 3: Interpret and develop mathematical models.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **1.A.3.1. Students are able to write number sentences from problem situations using "+" or "-", and "=" with numbers to ten.**<br>**Examples:** Write a number sentence to represent the problems.<br>1) Mary had 8 cookies. She gave 2 cookies to Bob. How many cookies does she have left?<br>2) Mary has 8 cookies. Bob has 2 cookies. How many cookies do they have altogether? |

**Indicator 4: Describe and apply the properties and behaviors of relations, functions, and inverses.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **1.A.4.1. Students are able to identify and extend repeating patterns containing multiple elements using objects and pictures.**<br>• Describe or demonstrate the next element in repeating patterns, e.g., rhythm, color, and shape.<br>• Find patterns or relations in data organized in tables or charts to determine what should come next. |
| (Comprehension) | **1.A.4.2. Students are able to determine common attributes in a given group and identify those objects that do not belong.** |

**First Grade Algebra**
**Performance Descriptors**

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|---|---|
| **Advanced** | **First grade students performing at the advanced level:**<br>• create and solve addition and subtraction number sentences (0-20);<br>• compare numbers and sets (1-20) and explain their thinking;<br>• extend and create repeating patterns. |
| **Proficient** | **First grade students performing at the proficient level:**<br>• solve addition and subtraction number sentences (0-10);<br>• compare numbers and sets (1-20);<br>• identify and extend repeating patterns. |
| **Basic** | **First grade students performing at the basic level:**<br>• solve addition number sentences (0-5);<br>• identify repeating patterns. |

**First Grade Algebra**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **First grade ELL students performing at the proficient level:**<br>• identify and extend repeating patterns;<br>• solve equations involving single-digit addition and subtraction;<br>• use concepts of equal to, greater than, and less than to compare numbers and sets (0-20);<br>• determine common attributes in a given group of objects and explain why some objects do not belong;<br>• read and speak the basic language of mathematics. |
| **Intermediate** | **First grade ELL students performing at the intermediate level:**<br>• extend repeating patterns and tell what comes next;<br>• solve simple equations involving single-digit addition and subtraction (0-10);<br>• communicate the concept of greater than through comparing numbers and sets;<br>• recognize and use basic mathematical terms;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **First grade ELL students performing at the basic level:**<br>• extend repeating patterns;<br>• use number sentences that include symbolic representations;<br>• solve numerical (not word) problems using addition;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **First grade ELL students performing at the emergent level:**<br>• copy, trace, and write numerals and mathematical symbols;<br>• imitate pronunciation of numbers and mathematical terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **First grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

## First Grade Geometry
## Grade Standards, Supporting Skills, and Examples

**Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **1.G.1.1. Students are able to describe characteristics of plane figures.**<br>**Examples:**<br>A circle is round.<br>A triangle has three straight lines. |
| (Comprehension) | **1.G.1.2. Students are able to sort basic three-dimensional figures.**<br>**Examples:**<br>Sphere<br>Cube<br>Cylinder<br>Cone |

**Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **1.G.2.1. Students are able to describe proximity of objects in space.**<br>**Examples:** Near, far, up, down, below, beside |

## First Grade Geometry
## Performance Descriptors

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|---|---|
| **Advanced** | **First grade students performing at the advanced level:**<br>• compare plane and solid figures based on observable characteristics;<br>• describe proximity of objects in space based on more than one attribute;<br>• identify geometric figures regardless of orientation. |

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|---|---|
| **Proficient** | **First grade students performing at the proficient level:**<br>• describe characteristics of plane figures;<br>• sort solid figures;<br>• describe proximity of objects in space. |
| **Basic** | **First grade students performing at the basic level:**<br>• recognize plane figures;<br>• recognize proximity of objects in space. |

**First Grade Geometry**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **First grade ELL students performing at the proficient level:**<br>• describe characteristics of plane figures;<br>• sort solid figures;<br>• describe proximity of objects in space;<br>• read and speak the basic language of geometry. |
| **Intermediate** | **First grade ELL students performing at the intermediate level:**<br>• identify plane figures verbally and find examples in the environment;<br>• identify solid figures;<br>• respond to written problems with oral support;<br>• recognize and use basic geometric terms;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **First grade ELL students performing at the basic level:**<br>• identify basic plane figures verbally;<br>• give simple oral responses to directed questions on topics presented in class;<br>• use pronunciation of geometric shapes and terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **First grade ELL students performing at the emergent level:**<br>• identify basic plane figures non-verbally;<br>• trace, copy, and draw basic geometric shapes;<br>• imitate pronunciation of geometric shapes and terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **First grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**First Grade Measurement**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Apply measurement concepts in practical applications.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **1.M.1.1. Students are able to tell time to the half-hour using digital and analog clocks and order a sequence of events with respect to time.** |
| (Application) | **1.M.1.2. Find a date on the calendar.** |
| (Application) | **1.M.1.3. Students are able to use different combinations of pennies, nickels, and dimes to represent money amounts to 25 cents.**<br>**Example:** Show different ways to show 15 cents using pennies, nickels, and dimes.<br>• State the value of pennies, nickels, and dimes using money models and pictures. |
| (Comprehension) | **1.M.1.4. Students are able to estimate weight using non-standard units of measure.**<br>**Example:** The cookie weighs about _____ unifix cubes. |
| (Knowledge) | **1.M.1.5. Students are able to identify appropriate measuring tools for length, weight, capacity, and temperature.** |
| (Comprehension) | **1.M.1.6. Students are able to compare and order concrete objects by temperature and capacity.**<br>**Examples:**<br>Temperature - hotter, colder<br>Capacity - holds more, holds less |

**First Grade Measurement**
**Performance Descriptors**

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|---|---|
| **Advanced** | **First grade students performing at the advanced level:**<br>• count and compare collections of coins;<br>• use clocks and calendars to solve problems;<br>• use appropriate units and tools to solve measurement problems. |

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|---|---|
| **Proficient** | **First grade students performing at the proficient level:**<br>• create different combinations of equal value using dimes, nickels, and pennies;<br>• use calendars to locate dates and sequence events and tell time to the half hour;<br>• estimate weight using non-standard units and choose appropriate measurement tools to solve problems;<br>• compare and order concrete objects by temperature and capacity. |
| **Basic** | **First grade students performing at the basic level:**<br>• identify types of coins;<br>• name the days of the week. |

**First Grade Measurement**
**ELL Performance Descriptors**

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|---|---|
| **Proficient** | **First grade ELL students performing at the proficient level:**<br>• count collections of coins including dimes, nickels, and pennies;<br>• tell time to half-hour;<br>• name days of the week;<br>• estimate weight using non-standard units;<br>• read and speak the basic language of measurement. |
| **Intermediate** | **First grade ELL students performing at the intermediate level:**<br>• identify coins;<br>• tell time to the hour;<br>• recognize and use basic measurement tools and terms;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **First grade ELL students performing at the basic level:**<br>• use non-standard units in various measurement situations;<br>• recognize and use basic measurement terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **First grade ELL students performing at the emergent level:**<br>• trace, copy, and draw measurement symbols;<br>• imitate pronunciation of numbers and measurement terms;<br>• use non-verbal communication to express measurement ideas. |
| **Pre-emergent** | **First grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**First Grade Number Sense**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **1.N.1.1. Students are able to read, write, count, and order numerals to 50.**<br>• Say the forward and backward number word sequences in the range 0-50.<br>• Say the number before and after a given number in the range 0-50.<br>• Use one-to-one correspondence.<br>• Keep track of what's been counted.<br>• Associate verbal names and standard numerals with whole numbers to 50.<br>• Count objects in a given set and write the corresponding numeral.<br>• Identify ordinal positions using an ordered set of objects, $1^{st}$ through $20^{th}$.<br>√ *Associate written word names with whole numbers to 50.* |
| (Knowledge) | **1.N.1.2. Students are able to use unit fraction models to create parts of a whole.**<br>• Determine ways in which shapes can be divided into equal pieces, i.e., fractional portions of fourths, halves, and thirds. |

**Indicator 2: Apply number operations with real numbers and other number systems.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **1.N.2.1. Students are able to solve addition and subtraction problems with numbers 0 to 20 written in horizontal and vertical formats using a variety of strategies.**<br>**Examples:**<br>Doubles<br>Near-doubles<br>One more, one less<br>Making tens<br>Breaking apart numbers<br>Commutative property<br>Using landmark numbers<br>Mental math<br>Relating numbers to money<br>Estimation<br>Inverse operations<br>Compensation<br>Internalized number combinations |

**Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **1.N.3.1. Students are able to solve addition and subtraction problems up to 20 in context.**<br>• Represent problem situations and solve using concrete objects, pictures, or numbers.<br>• Explain how one arrives at solutions to problems.<br>• Select appropriate operation(s).<br>• Estimate to determine if a given answer is reasonable. |

**First Grade Number Sense**
**Performance Descriptors**

| | |
|---|---|
| **Advanced** | **First grade students performing at the advanced level:**<br>• estimate and solve two-digit addition and subtraction problems;<br>• read, write, count, and sequence numerals to 100;<br>• create fractional parts of a whole. |
| **Proficient** | **First grade students performing at the proficient level:**<br>• use various strategies to solve addition and subtraction problems up to 20;<br>• read, write, count, and sequence numerals to 50;<br>• create fractional parts of a whole using unit fractions. |
| **Basic** | **First grade students performing at the basic level:**<br>• solve addition and subtraction problems up to 10;<br>• read, write, count, and sequence numerals to 20;<br>• identify fractional parts of a whole using unit fractions. |

**First Grade Number Sense**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **First grade ELL students performing at the proficient level:**<br>• solve basic addition and subtraction problems (0-20);<br>• sequence and compare numbers up to 50;<br>• identify and represent unit fractions using concrete materials;<br>• read and speak the language of mathematics. |
| **Intermediate** | **First grade ELL students performing at the intermediate level:**<br>• solve basic addition and subtraction problems using concrete materials (0-20);<br>• count to 50;<br>• recognize and use basic mathematical terms;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **First grade ELL students performing at the basic level:**<br>• solve basic addition problems using concrete materials (0-10);<br>• count to 20;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **First grade ELL students performing at the emergent level:**<br>• count to 20;<br>• copy, trace, and write numerals and mathematics symbols;<br>• imitate pronunciation of numbers;<br>• use non-verbal communication to express mathematical ideas. |

| | |
|---|---|
| **Pre-emergent** | **First grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**First Grade Statistics & Probability**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **1.S.1.1. Students are able to display data in simple picture graphs with units of one and bar graphs with intervals of one.**<br>**Examples:** modes of transportation to school, pets owned by students, articles of clothing. |
| (Comprehension) | **1.S.1.2. Students are able to answer questions from organized data.**<br>**Example:** What observation can you make from this graph? |

**Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **1.S.2.1. Students are able to recognize whether the outcome of a simple event is possible or impossible.**<br>**Examples:** spinners, number cubes, everyday events<br>1) The spinner is half blue and half yellow. Can you land on green?<br>2) You have green and yellow cubes in a bag. Can you pull out a green cube? |

**First Grade Statistics & Probability**
**Performance Descriptors**

| | |
|---|---|
| **Advanced** | **First grade students performing at the advanced level:**<br>• determine whether an outcome is possible, impossible, or certain;<br>• organize and display data in more than one way and answer questions from collected data. |
| **Proficient** | **First grade students performing at the proficient level:**<br>• determine whether an outcome is possible or impossible;<br>• organize and display data, and answer questions from collected data. |
| **Basic** | **First grade students performing at the basic level:**<br>• answer questions about data displayed in graphs. |

**First Grade Statistics & Probability**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **First grade ELL students performing at the proficient level:**<br>• organize and display data and answer questions about collected data;<br>• recognize outcomes of simple events as possible or impossible;<br>• read and speak the basic language of mathematics. |
| **Intermediate** | **First grade ELL students performing at the intermediate level:**<br>• answer questions from organized data;<br>• recognize and use basic mathematical terms;<br>• give simple oral or pictorial responses to directed questions on topics presented in class. |
| **Basic** | **First grade ELL students performing at the basic level:**<br>• collect data and answer questions about the data;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **First grade ELL students performing at the emergent level:**<br>• imitate pronunciation of numbers and mathematical terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **First grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**Second Grade Algebra**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Use procedures to transform algebraic expressions.**

*Note: Second grade students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **2.A.2.1. Students are able to use concepts of equal to, greater than, and less than to compare numbers (0-100).**<br>• For numbers 0 - 100, identify 10 more/10 less.<br>• Write the words less than or greater than between two numbers.<br>Example: 50 is less than 78<br>• Identify the number that is greater than/less than. |
| (Application) | **2.A.2.2. Students are able to solve open addition and subtraction sentences with one unknown (☐) using numbers equal to or less than 20.**<br>**Examples:**<br>10 = ☐ + 8<br>☐ + 6 = 8 + 1<br>☐ = 7 – 3<br>10 – ☐ = 4 |
| (Application) | **2.A.2.3. Students are able to balance simple addition and subtraction equations using sums up to 20.**<br>**Examples:**<br>9 + 6 = 10 + ☐<br>• Use a pan balance and cubes to visually balance equations.<br>• Describe strategies used in adding and subtracting.<br>Example: Part-part-whole<br>• Use the commutative property to solve related equations. |

**Indicator 3: Interpret and develop mathematical models.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **2.A.3.1. Students are able to write and solve number sentences from word problems.**<br>**Examples:** Write number sentences that go with these story problems.<br>1) Mary made 9 bracelets. She bought 4 more bracelets. How many bracelets does she have in all?<br>2) Bob caught 18 fish. He ate 9 for supper. How many are left? |

**Indicator 4: Describe and apply the properties and behaviors of relations, functions and inverses.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **2.A.4.1. Students are able to find and extend growing patterns using symbols, objects, and numbers.**<br>• Identify even and odd numbers.<br>• Recognize and extend basic number patterns using a 0-99 or 1-100 chart. |
| (Comprehension) | **2.A.4.2. Students are able to determine likenesses and differences between sets.**<br>**Example:** Use Venn diagrams |

**Second Grade Algebra**
**Performance Descriptors**

| | |
|---|---|
| **Advanced** | **Second grade students performing at the advanced level:**<br>• create and solve addition and subtraction number sentences;<br>• compare and classify numbers and sets and explain their thinking;<br>• extend and create growing patterns. |
| **Proficient** | **Second grade students performing at the proficient level:**<br>• solve addition and subtraction number sentences (0-20);<br>• compare numbers and sets (1-100);<br>• find and extend growing patterns. |
| **Basic** | **Second grade students performing at the basic level:**<br>• solve addition and subtraction number sentences (0-10);<br>• compare sets;<br>• identify growing patterns. |

**Second Grade Algebra**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **Second grade ELL students performing at the proficient level:**<br>• write and balance equations involving addition and subtraction of numbers to 10 and explain the processes used;<br>• find and extend growing patterns;<br>• determine likenesses and differences between sets;<br>• use concepts of greater than, less than, and equal to compare numbers and sets (0-100);<br>• read, write, and speak the basic language of mathematics. |
| **Intermediate** | **Second grade ELL students performing at the intermediate level:**<br>• balance simple equations involving addition and subtraction of one-digit numbers;<br>• extend growing patterns;<br>• determine likenesses between sets;<br>• use +, -, and = symbols to write number sentences and solve problems;<br>• give simple oral or written responses to directed questions on topics presented in class. |
| **Basic** | **Second grade ELL students performing at the basic level:**<br>• solve number sentences using manipulatives or symbolic representations (0-10);<br>• compare numbers and sets (0-50);<br>• extend patterns;<br>• recognize and use basic mathematical terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **Second grade ELL students performing at the emergent level:**<br>• copy, trace, and write numerals and mathematics symbols;<br>• imitate pronunciation of numbers and mathematical terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **Second grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

## Second Grade Geometry
## Grade Standards, Supporting Skills, and Examples

**Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **2.G.1.1. Students are able to use the terms side and vertex (corners) to identify plane and solid figures.**<br>**Examples (but not limited to):**<br>Hexagon<br>Circle<br>Square<br>Triangle<br>Sphere<br>Cube |

**Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **2.G.2.1. Students are able to identify geometric figures regardless of position and orientation in space.**<br>**Examples:**<br>  and  are both triangles. |

## Second Grade Geometry
## Performance Descriptors

| | |
|---|---|
| **Advanced** | **Second grade students performing at the advanced level:**<br>• identify and classify plane and solid figures based on attributes;<br>• identify and classify geometric figures regardless of position in space. |
| **Proficient** | **Second grade students performing at the proficient level:**<br>• identify plane and solid figures based on attributes;<br>• identify geometric figures regardless of position in space. |

| | |
|---|---|
| **Basic** | **Second grade students performing at the basic level:**<br>• identify plane figures based on attributes. |

**Second Grade Geometry**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **Second grade ELL students performing at the proficient level:**<br>• identify and compare plane and solid figures regardless of position in space;<br>• read, write, and speak the basic language of geometry. |
| **Intermediate** | **Second grade ELL students performing at the intermediate level:**<br>• describe characteristics of geometric figures;<br>• write responses with oral support;<br>• explain in geometric terms the sequence of steps used in solving problems;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **Second grade ELL students performing at the basic level:**<br>• identify basic geometric figures and shapes;<br>• copy words related to geometry;<br>• recognize and use basic geometric terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **Second grade ELL students performing at the emergent level:**<br>• sort geometric figures;<br>• trace, copy, and draw basic geometric shapes;<br>• imitate pronunciation of geometric shapes and terms;<br>• use non-verbal communication to express mathematical ideas. |
| **Pre-emergent** | **Second grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**Second Grade Measurement**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Apply measurement concepts in practical applications.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Knowledge) | **2.M.1.1. Students are able to tell time to the minute using digital and analog clocks and relate time to daily events.** |
| (Application) | **2.M.1.2. Students are able to use the calendar to solve problems.** |
| (Application) | **2.M.1.3. Students are able to determine the value of a collection of like and unlike coins with a value up to $1.00.** |
| (Knowledge) | **2.M.1.4. Students are able to represent and write the value of money using the "¢" sign and in decimal form using the "$" sign.** |
| (Comprehension) | **2.M.1.5. Students are able to use whole number approximations for capacity using non-standard units of measure.**<br>**Examples:**<br>The jar holds about how many marbles?<br>How many small jars of water will it take to fill a big jar? |
| (Comprehension) | **2.M.1.6. Students are able to solve everyday problems by measuring length to the nearest inch or foot.**<br>**Examples:**<br>How long is your shoe?<br>How tall is your chair? |
| (Application) | **2.M.1.7. Students are able to locate and name concrete objects that are about the same length, height, weight, capacity, and temperature as a given concrete object.** |

**Second Grade Measurement**
**Performance Descriptors**

| | |
|---|---|
| **Advanced** | **Second grade students performing at the advanced level:**<br>• count, compare, and trade coins appropriately for a given amount;<br>• solve problems using time;<br>• use appropriate units and tools in various measurement situations. |
| **Proficient** | **Second grade students performing at the proficient level:**<br>• count collections of coins up to $1.00 and represent the value using appropriate forms;<br>• tell time to one minute intervals and use calendars to solve problems;<br>• measure the length of concrete objects to the nearest inch or foot;<br>• name concrete objects of comparable dimensions. |
| **Basic** | **Second grade students performing at the basic level:**<br>• count collections of dimes, nickels, or pennies;<br>• tell time to the half-hour;<br>• measure concrete objects using non-standard units. |

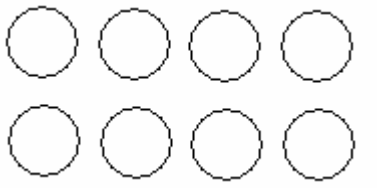
**Second Grade Measurement**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **Second grade ELL students performing at the proficient level:**<br>• count collections of coins;<br>• tell time to one-minute intervals and use calendars to solve problems;<br>• measure length of concrete objects using standard and non-standard units;<br>• read, write, and speak the language of mathematics. |
| **Intermediate** | **Second grade ELL students performing at the intermediate level:**<br>• count collections of coins including nickels, dimes, and pennies;<br>• tell time to the half-hour and read a calendar;<br>• identify appropriate standard or non-standard units to measure and record in various measurement situations;<br>• use measurement terms to explain how to solve problems;<br>• give simple oral responses to directed questions on topics presented in class. |
| **Basic** | **Second grade ELL students performing at the basic level:**<br>• tell time to the hour;<br>• use standard and non-standard units to measure in various situations;<br>• recognize and use basic measurement terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |

| | |
|---|---|
| **Emergent** | **Second grade ELL students performing at the emergent level:**<br>• use non-standard units in various measurement situations;<br>• trace, copy, and draw measurement symbols;<br>• imitate pronunciation of numbers and measurement terms;<br>• use non-verbal communication to express measurement ideas. |
| **Pre-emergent** | **Second grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**Second Grade Number Sense**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **2.N.1.1. Students are able to read, write, count, and sequence numerals to 100.**<br>• Say the forward and backward number word sequences in the range 0-100.<br>• Say the number before and after a given number in the range 0-100.<br>• Say the forward and backward skip counting sequences in the range 0-100 for twos, fives, and tens.<br>• Use one-to-one correspondence.<br>• Keep track of what's been counted.<br>• Count objects by groups of twos, fives and tens to 100.<br>• Associate verbal names, written word names, and standard numerals with whole numbers to 100.<br>• Use words, models, and expanded notation to structure numbers as tens and ones to 100. |
| (Comprehension) | **2.N.1.2. Students are able to identify and represent fractions as parts of a group.**<br>**Example:** Circle half of the cookies.<br>  |

**Indicator 2: Apply number operations with real numbers and other number systems.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **2.N.2.1. Students are able to solve two-digit addition and subtraction problems written in horizontal and vertical formats using a variety of strategies.**<br>**Examples:**<br>Doubles<br>Near-doubles<br>One more, one less<br>Making tens<br>Breaking apart numbers<br>Commutative property<br>Using landmark numbers<br>Mental math<br>Relating to money<br>Estimation<br>Inverse operations<br>Compensation |

**Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **2.N.3.1. Students are able to solve addition and subtraction problems up to 100 in context.**<br>• Represent problem situations and solve using concrete objects, pictures, numbers, tables, or charts.<br>• Explain the strategies used to arrive at a solution to a problem.<br>• Select appropriate operation(s).<br>• Estimate to determine if a given answer is reasonable**.** |

**Second Grade Number Sense**
**Performance Descriptors**

| | |
|---|---|
| **Advanced** | **Second grade students performing at the advanced level:**<br>• apply strategies of two-digit addition and subtraction to three-digit numbers;<br>• read, write, count, and sequence numerals to 1,000;<br>• create fractional parts of a group. |
| **Proficient** | **Second grade students performing at the proficient level:**<br>• use various strategies to solve addition and subtraction problems using one- and two-digit numbers;<br>• read, write, count, and sequence numerals to 100;<br>• identify and represent fractional parts of a group. |
| **Basic** | **Second grade students performing at the basic level:**<br>• solve addition and subtraction problems to 20;<br>• read, write, count, and sequence numerals to 50. |

**Second Grade Number Sense**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **Second grade ELL students performing at the proficient level:**<br>• solve two-digit addition and subtraction problems;<br>• sequence and compare numbers up to 100;<br>• identify fractions representing parts of a group;<br>• read, write, and speak the language of mathematics. |
| **Intermediate** | **Second grade ELL students performing at the intermediate level:**<br>• add and subtract one- and two-digit numbers;<br>• sequence and compare numbers to 75;<br>• give simple oral or pictorial responses to directed questions on topics presented in class. |
| **Basic** | **Second grade ELL students performing at the basic level:**<br>• add and subtract one- and two-digit whole numbers without regrouping;<br>• sequence and compare numbers to 50;<br>• recognize and use basic mathematical terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **Second grade ELL students performing at the emergent level:**<br>• solve oral problems using addition and subtraction (0-20);<br>• count to 20;<br>• copy, trace, and write numerals and mathematics symbols;<br>• imitate and use correct pronunciation of numbers and mathematical terms;<br>• use non-verbal communication to express mathematical ideas. |

| | |
|---|---|
| **Pre-emergent** | **Second grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

**Second Grade Statistics & Probability**
**Grade Standards, Supporting Skills, and Examples**

**Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Comprehension) | **2.S.1.1. Students are able to use interviews, surveys, and observations to gather data.**<br>**Examples:**<br>Observe the sky conditions for 5 days.<br>Conduct a survey on classmates' eye colors. |
| (Application) | **2.S.1.2. Students are able to represent data sets in more than one way.**<br>**Examples:** bar graphs, frequency tables, pictographs. |
| (Comprehension) | **2.S.1.3. Students are able to answer questions about and generate explanations of data given in tables and graphs.**<br>• Explore features of data sets<br>Example: range and mode |

**Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems.**

| Bloom's Taxonomy Level | Standard, Supporting Skills, and Examples |
|---|---|
| (Application) | **2.S.2.1. Students are able to list possible outcomes of a simple event and make predictions about which outcome is more or less likely to occur.**<br>**Examples:**<br>The spinner is $\frac{1}{2}$ blue, $\frac{1}{4}$ yellow, and $\frac{1}{4}$ green. On which color are you most likely to land?<br>You have 7 green and 3 yellow cubes in a bag. Which color cube would you be least likely to pull out? |

**Second Grade Statistics & Probability**
**Performance Descriptors**

| | |
|---|---|
| **Advanced** | **Second grade students performing at the advanced level:**<br>• compare data using tables or graphs;<br>• generate questions for a given table or graph;<br>• make predictions and list possible outcomes that are more likely, less likely, or certain to occur. |
| **Proficient** | **Second grade students performing at the proficient level:**<br>• collect and represent data using tables or graphs;<br>• answer questions and provide explanations for a given table or graph;<br>• make predictions and list possible outcomes that are more or less likely to occur. |
| **Basic** | **Second grade students performing at the basic level:**<br>• represent data using tables or graphs. |

**Second Grade Statistics & Probability**
**ELL Performance Descriptors**

| | |
|---|---|
| **Proficient** | **Second grade ELL students performing at the proficient level:**<br>• collect and represent data using tables and graphs;<br>• answer questions about given tables and graphs;<br>• discuss the probability of simple events and list possible outcomes (more or less likely);<br>• read, write, and speak the language of mathematics. |
| **Intermediate** | **Second grade ELL students performing at the intermediate level:**<br>• represent data using tables or graphs;<br>• list possible outcomes of simple events;<br>• give simple oral or written responses to questions on topics presented in class. |
| **Basic** | **Second grade ELL students performing at the basic level:**<br>• answer directed questions from collected data;<br>• collect and organize data in small groups;<br>• recognize and use basic statistical and probability terms;<br>• respond to yes or no questions and to problems presented pictorially or numerically in class. |
| **Emergent** | **Second grade ELL students performing at the emergent level:**<br>• give pictorial responses to questions on topics presented in class;<br>• imitate pronunciation of numbers and mathematical terms;<br>• use non-verbal communication to express mathematical ideas. |

| | |
|---|---|
| **Pre-emergent** | **Second grade ELL students performing at the pre-emergent level:**<br>• observe and model appropriate cultural and learning behaviors from peers and adults;<br>• listen to and observe comprehensible instruction and communicate understanding non-verbally. |

# ALGEBRA STANDARDS
# K-2

**Indicator 1: Use procedures to transform algebraic expressions.**

*Note: Kindergarten through grade 2 students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.A.2.1. (Comprehension) Compare collections of objects to determine more, less, and equal (greater than and less than). | 1.A.2.1. (Comprehension) Use the concepts and language of more, less, and equal (greater than and less than) to compare numbers and sets (0 to 20). | 2.A.2.1. (Comprehension) Use concepts of equal to, greater than, and less than to compare numbers (0-100). |
| | 1.A.2.2. (Application) Solve open addition and subtraction sentences with one unknown (☐) using numbers equal to or less than 10. | 2.A.2.2. (Application) Solve open addition and subtraction sentences with one unknown (☐) using numbers equal to or less than 20. |
| | | 2.A.2.3. (Application) Balance simple addition and subtraction equations using sums up to 20. |

**Indicator 3: Interpret and develop mathematical models.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.A.3.1. (Knowledge) Use concrete objects to model the meaning of the "+" and "-" symbols. | 1.A.3.1. (Application) Students are able to write number sentences from problem situations using + or – and = with numbers to 10. | 2.A.3.1. (Application) Write and solve number sentences from word problems. |

**Indicator 4: Describe and apply the properties and behaviors of relations, functions and inverses.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.A.4.1. (Knowledge) Identify and extend two-part repeating patterns using concrete objects. | 1.A.4.1. (Comprehension) Identify and extend repeating patterns containing multiple elements using objects and pictures. | 2.A.4.1. (Comprehension) Find and extend growing patterns using symbols, objects, and numbers. |
| K.A.4.2. (Comprehension) Sort and classify objects according to one attribute. | 1.A.4.2. (Comprehension) Determine common attributes in a given group and identify those objects that do not belong. | 2.A.4.2. (Comprehension) Determine likenesses and differences between sets. |

# GEOMETRY STANDARDS
# K - 2

**Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.G.1.1. (Knowledge) Identify basic two-dimensional (plane) figures. | 1.G.1.1. (Comprehension) Describe characteristics of plane figures. | 2.G.1.1. (Comprehension) Use the terms side and vertex (corners) to identify plane and solid figures. |
| | 1.G.1.2. (Comprehension) Sort basic three-dimensional figures. | |

**Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.G.2.1. (Comprehension) Describe the position of two-dimensional (plane) figures. | 1.G.2.1. (Comprehension) Describe proximity of objects in space. | 2.G.2.1. (Knowledge) Identify geometric figures regardless of position and orientation in space. |

# MEASUREMENT STANDARDS
# K-2

**Indicator 1: Apply measurement concepts in practical applications.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.M.1.1. (Knowledge) Tell time to the hour using analog and digital clocks. | 1.M.1.1. (Knowledge) Tell time to the half-hour using analog and digital clocks and order a sequence of events with respect to time. | 2.M.1.1. (Knowledge) Tell time to the minute using analog and digital clocks and relate time to daily events. |
| K.M.1.2. (Knowledge) Name the days of the week. | 1.M.1.2. (Application) Find a date on the calendar. | 2.M.1.2. (Application) Use the calendar to solve problems. |
| K.M.1.3. (Knowledge) Identify pennies, nickels, dimes, and quarters using money models. | 1.M.1.3. (Application) Use different combinations of pennies, nickels, and dimes to represent money amounts to 25 cents. | 2.M.1.3. (Application) Determine the value of a collection of like and unlike coins with a value up to $1.00. |
| K.M.1.4. (Knowledge) Estimate length using non-standard units of measure. | 1.M.1.4. (Comprehension) Estimate weight using non-standard units of measure. | 2.M.1.4. (Knowledge) Represent and write the value of money using the "¢" sign and in decimal form using the "$" sign. |
| K.M.1.5. (Comprehension) Compare and order concrete objects by length, height, and weight. | 1.M.1.5. (Knowledge) Identify appropriate measuring tools for length, weight, capacity, and temperature. | 2.M.1.5. (Comprehension) Use whole number approximations for capacity using non-standard units of measure. |
| | 1.M.1.6. (Comprehension) Compare and order concrete objects by temperature and capacity. | 2.M.1.6. (Comprehension) Solve everyday problems by measuring length to the nearest inch or foot. |
| | | 2.M.1.7. (Application) Locate and name concrete objects that are about the same length, height, weight, capacity, and temperature as a given concrete object. |

# NUMBER SENSE STANDARDS
# K-2

**Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.N.1.1. (Comprehension) Read, write, count, and sequence numerals to 20. | 1.N.1.1. (Comprehension) Read, write, count, and order numerals to 50. | 2.N.1.1. (Comprehension) Read, write, count, and sequence numerals to 100. |
| K.N.1.2. (Knowledge) Use fraction models to create one half of a whole. | 1.N.1.2. (Knowledge) Use unit fraction models to create parts of a whole. | 2.N.1.2. (Comprehension) Identify and represent fractions as parts of a group. |

**Indicator 2: Apply number operations with real numbers and other number systems.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| | 1.N.2.1. (Application) Solve addition and subtraction problems with numbers 0 to 20 written in horizontal and vertical formats using a variety of strategies. | 2.N.2.1. (Application) Solve two-digit addition and subtraction problems written in horizontal and vertical formats using a variety of strategies. |

**Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.N.3.1. (Application) Solve addition and subtraction problems up to 10 in context. | 1.N.3.1. (Application) Solve addition and subtraction problems up to 20 in context. | 2.N.3.1. (Application) Solve addition and subtraction problems up to 100 in context. |

# STATISTICS AND PROBABILITY STANDARDS
# K-2

**Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| K.S.1.1. (Knowledge) Describe data represented in simple graphs (using real objects) and pictographs. | 1.S.1.1. (Application) Display data in simple picture graphs with units of one and bar graphs with intervals of one. | 2.S.1.1. (Comprehension) Use interviews, surveys, and observations to gather data. |
| | 1.S.1.2. (Comprehension) Answer questions from organized data. | 2.S.1.2. (Application) Represent data sets in more than one way. |
| | | 2.S.1.3. (Comprehension) Answer questions about and generate explanations of data given in tables and graphs. |

**Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems.**

| Kindergarten | First Grade | Second Grade |
|---|---|---|
| (Mastery of this indicator does not emerge until first grade.) | 1.S.2.1. (Comprehension) Recognize whether the outcome of a simple event is possible or impossible. | 2.S.2.1. (Application) List possible outcomes of a simple event and make predictions about which outcome is more or less likely to occur. |